USSN: 10/539,024 Attorney Docket No: 2384.00059

IN THE SPECIFICATION:

Please amend the following paragraphs:

[0023] FIG. 3 is a graph showing cyclic voltammograms of K.sub.3Fe(CN).sub.6 recorded utilizing platinum wire and platinum coated carbon electrodes; and

[0024] FIG. 4 is a graph showing cyclic voltammograms of K.sub.3Fe(CN).sub.6 recorded utilizing platinum coated electrode or pure platinum wire as a working electrode:

[0025] FIG. 5 is a graph exhibiting the reduction of oxygen in 1.0 M phosphoric acid solution using platinum coated carbon rods with five and ten cycle platinum loading; and

[0026] FIG. 6 is a graph showing the charge accumulation in 1.0 M sulfuric acid using platinum coated carbon rods with five and 10 cycle platinum loading using a hydrogen reference electrode.

[0044] FIG. 2 shows the cyclic voltammograms recorded by scanning the potential between 0 and -1.0 V for 20 cycles. Each complete cycle consists of a forward and a reverse scan. As can be seen from the diagram, there is a large change in current during the first four cycles. Subsequently, the changes in current from one cycle to the next decrease after several cycles, indicating the completion of electrode modification. In fact, very little change in current is seen after 10 cycles. Although the current did not change significantly after five cycles, platinum loading continues until it reaches saturation, which requires at least about 20 cycles. Amounts of platinum loaded on carbon surfaces, as determined by ion plasma coupled mass spectrometry (ICP-MS), are listed in Table 1. A uniform coating of the platinum on the carbon

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surface was observed following the cyclic voltammetry experiments. However, the effective surface area as determined (data not shown) in FIG.-6 is much larger than the geometric surface area of carbon articles. Accordingly, the actual platinum loading is lower than the values provided in Table 1 and in some instances the loading can be three times less for carbon articles. TABLE-US-00001 TABLE 1 Coated Platinum Contents on Carbon Surfaces Following Cyclic Voltammetry Platinum Loading mg/cm.sup.2 Carbon Rod/ Carbon Paper/ Carbon Rod/ Carbon Paper/ Carbon Paper/ No. Of Pt-Blue Pt-Blue K.sub.2PtCl.sub.4 K.sub.2PtCl.sub.4 K.sub.2PtCl.sub.4 Cycles (Stirring) (Stirring) (Without Stirring) (Without Stirring) (Stirring) 05 0.0448 0.0303 – 0.0401 0.1146 08 0.0889 – – – 10 0.1198 0.0761 – 0.0779 0.1838 15 0.1810 0.1176 0.0910 – 20 0.2158 0.1452 0.0980 0.1100 0.2058

[0047] The efficacy of these platinum coated electrodes was demonstrated by their ability to reduce oxygen in phosphoric acid solution. In these series of experiments, platinum coated electrodes were used as working electrode and Ag/AgCl as the reference electrode for the reduction of oxygen by acquiring cyclic voltammograms of oxygen saturated phosphoric acid. FIG. 5 shows tremendous Tremendous enhancement of reduction current was found with when platinum coated carbon rods (ehart b, c, d and e; five, ten, twenty and twenty five cycles of coatings) compared to no reduction of oxygen with bare carbon rod (ehart a data not shown). Similar experiments in other conditions also demonstrate efficient reduction of oxygen.